

What is claimed is:

[Claim 1] 1. An apparatus for supplying differently colored polyurethane forming materials, the apparatus comprising:

- a source of isocyanate;
- a source of polyol;
- multiple colorant sources for supplying multiple colorants;
- multiple premix chambers that are each connected to a respective colorant source and one of the source of isocyanate and the source of polyol, each premix chamber having a mixing element for mixing a respective colorant and one of isocyanate and polyol to form a selectively colored material;
- a spray head in communication with the premix chambers and the other of the source of isocyanate and the source of polyol; and
- a valve assembly disposed between the spray head and the premix chambers for selectively introducing selectively colored material from one of the premix chambers and the other of isocyanate and polyol to the spray head.

[Claim 2] 2. The apparatus of claim 1 wherein the source of polyol includes a catalyst.

[Claim 3] 3. The apparatus of claim 1 wherein the source of polyol includes non-catalyzed polyol.

[Claim 4] 4. The apparatus of claim 1 further comprising an additive source including an ultraviolet light stabilizer, and an additional premix chamber connected to the source of polyol and the additive source, the additional premix chamber having a mixing element for mixing polyol and the ultraviolet light stabilizer, the additional premix chamber further being in communication with the spray head for supplying polyol mixed with ultraviolet light stabilizer to the spray head.

[Claim 5] 5. The apparatus of claim 1 further comprising multiple pumps, each pump being disposed between a respective premix chamber and the valve assembly.

[Claim 6] 6. The apparatus of claim 5 further comprising first and second additional pumps, the first additional pump being disposed between the source of isocyanate and the spray head, and the second additional pump being disposed between the source of polyol and the spray head.

[Claim 7] 7. The apparatus of claim 1 wherein each premix chamber is connected to the source of polyol, and the spray head is in communication with the source of isocyanate.

[Claim 8] 8. An apparatus for supplying polyurethane forming materials, the apparatus comprising:

 a source of isocyanate;
 a source of polyol;
 a first colorant source for supplying a first colorant;
 a first premix chamber connected to the source of polyol and the first colorant source, the first premix chamber having a mixing element for mixing polyol and the first colorant;

 a spray head in communication with the source of isocyanate, the source of polyol and the premix chamber; and

 a valve assembly disposed upstream of the spray head for selectively introducing polyol from the source of polyol or polyol and first colorant from the first premix chamber to the spray head.

[Claim 9] 9. The apparatus of claim 8 further comprising a second colorant source for supplying a second colorant, and a second premix chamber connected to the source of polyol and the second colorant source, the second premix chamber having a mixing element for mixing polyol and the second colorant, wherein the valve assembly is operative to introduce polyol from the source of polyol, polyol and first colorant from the first premix chamber, or polyol and second colorant from the second premix chamber to the spray head.

[Claim 10] 10. The apparatus of claim 8 further comprising first, second and third pumps, the first pump being disposed between the source of isocyanate and the spray head, the second pump being disposed between the source of polyol and the spray head, and the third pump being disposed between the first premix chamber and the valve assembly.

[Claim 11] 11. A method of supplying differently colored polyurethane forming materials, the method comprising:

 a) supplying one of isocyanate and polyol to a selected one of multiple premix chambers;

 b) supplying colorant from a selected one of multiple colorant sources to the selected one of the premix chambers;

- c) mixing the colorant with the one of isocyanate and polyol in the selected one of the premix chambers to form a mixture of selectively colored material;
- d) supplying the selectively colored material and the other of polyol and isocyanate to a spray head; and
- e) repeating a), b), c) and d) by selecting a different premix chamber in a) and a different colorant in b).

[Claim 12] 12. The method of claim 11 wherein step a) includes supplying polyol to the selected one of the premix chambers, and step d) includes supplying isocyanate to the spray head.

[Claim 13] 13. The method of claim 12 wherein the polyol includes a catalyst.

[Claim 14] 14. The method of claim 12 wherein the polyol is non-catalyzed.

[Claim 15] 15. The method of claim 12 further comprising spraying the selectively colored material and isocyanate from the spray head into a mold to form a first portion of a first part, subsequently supplying unpigmented polyol to the spray head, and spraying the unpigmented polyol and isocyanate from the spray head into the mold to form a second portion of the first part.

[Claim 16] 16. The method of claim 11 wherein each colorant source includes a liquid colorant.

[Claim 17] 17. The method of claim 11 further comprising introducing nitrogen into the selected one of the premix chambers to reduce moisture.

[Claim 18] 18. The method of claim 11 further comprising recirculating one mixture of selectively colored material to one of the premix chambers when the selectively colored material is not being supplied to the spray head.